ABSTRACT

The present invention provides a joining structure capable of greatly improving the proof stress and the fatigue property by alleviating the stress concentration and residual stress caused by welding heat at one or both ends of a tabular member.

In the present invention, one or both ends 4 of a tabular member 3 such as a reinforcing rib, fixed to the surface of a structural member 1 in the direction of the principal stress of the structural member 1 so as to protrude in the shape of T, is/are bent in a direction deviating from the direction of the principal stress and, by this, the rigidity at the end(s) 4 of the tabular member 3 decreases and the stress concentration is alleviated. It is preferable to bend one or both ends of a tabular member 3 in the shape of an gradual curve and to the extent that each bent end is formed at a right angle to the direction of the principal stress. The tabular member may have the shape of a flat plate, or it may be bent so that it has the shape of U or V as a whole. Further, the tabular member may be welded to a structural member or formed as an integral part of a structural member.